

REMARKS

Applicants appreciate the thorough examination of the application that is reflected in the Office Action dated February 25, 2004. Claims 1-43 are pending in the application. Reconsideration of the application are respectfully requested.

Art-Based Rejections

The Office rejects claims 1, 2, 5, 6, 9-16, 20, 23-27, 30, 31 and 34-40 under 35 U.S.C. 102(b) as being anticipated by Hobnkasalo et al. (USPN 5,859,843), and rejects claims 3, 4, 7, 8, 17 – 19, 21, 22, 28, 29, 32, 33 and 41-43 under 35 U.S.C. 103(a) as being unpatentable over Honkasalo et al (USPN 6,064,662) in view of Kawable (EP0998052).

Applicants respectfully traverse these rejections for at least the following reasons.

Claim 1

In rejecting claim 1, the Office Action asserts that col. 4, lines 37-55 of the Honkasalo reference discloses “assigning a first channel element to demodulate data symbols of said first portion of data symbols,” and “assigning a second channel element to demodulate data symbols of said second portion of data symbols.” The Office asserts that these limitations are “inherent because the demodulation process is a inverse of the modulation.” Applicants respectfully disagree, and submit that this is also a mischaracterization of the Honkasalo reference for at least the following reasons.

Applicants note that the present application describes a “channel element” as a “communication resource ...allocated for processing a data frame” that “may include one or more fingers for correlating with different multi-path signals. The channel element demodulates the data symbols in each received data frame.” Application at page 2, lines 3-6. The present application also discusses an exemplary embodiment of a channel element 300, that is shown in FIG. 3, at page 8, line 4 through page 13, line 25. As noted at page 5 of the present application, partitioning a frame of data into at least first and second portions of data symbols allows the channel elements assigned to the first and second portions to demodulate the data symbols in the data frame more efficiently.

By contrast, column 4, lines 37-55 of the Honkasalo reference discloses:

FIG. 3 shows an example of a major frame of data (100) consisting of several minor frames (110, 120, 130). In this example, a physical data rate of 24.0

kbps is desired and the basic data rate is 9.6 kbps. Accordingly, $24/9.6=2.5$ so that two full rate frames 110 and 120 of 192 bits are concatenated with one half rate frame 130 of 96 bits in producing major frame 100.

The IS-95 air interface has a forward link from the base station to the mobile station and a reverse link from the mobile station to the base station. In applying the present invention to the forward link, it is preferred that the minor frames of data be transmitted in parallel using multiple Walsh channels. A different Walsh code is used to spread each minor frame and then the spread signals are transmitted at the same time rate over the air to the mobile station. On the other hand, in applying the invention to the reverse link, it is preferred that the minor frames of data be concatenated and transmitted serially. (Column 4, lines 37-55 of the Honkasalo reference; Emphasis added.)

Applicants submit that nothing in column 4, lines 37-55 of the Honkasalo reference suggests “assigning a first channel element to demodulate data symbols of said first portion of data symbols,” or “assigning a second channel element to demodulate data symbols of said second portion of data symbols,” as recited in claim 1. Applicants submit that the Honkasalo reference does not mention channel elements, much less suggest assignment of different channel elements to demodulate different portions of data symbols that are from a common frame of data. Moreover, this assignment would not be inherent in Honkasalo. Rather, the Honkasalo reference simply discloses that minor frames of data are “transmitted in parallel using multiple Walsh channels.” Applicants submit that simply because Honkasalo teaches that minor frames of data are “transmitted in parallel using multiple Walsh channels”, this does not necessarily mean that different channel elements are assigned to demodulate different portions of data symbols from a common frame of data.

Thus, Applicants also respectfully submit that the cited references fail to teach or suggest, for example, “assigning a first channel element to demodulate data symbols of said first portion of data symbols,” or “assigning a second channel element to demodulate data symbols of said second portion of data symbols,” as recited in claim 1.

Applicants respectfully submit that the cited references, taken alone or in combination, fail to teach or suggest at least the above recitations of claim 1. Accordingly, Applicants respectfully submit that claim 1 is patentable over the cited references. Applicants further submit that dependent claims 2-4 are also patentable over the cited references at least by virtue of their dependency from claim 1, and also because claims 2-4 include features that are neither taught nor

suggested by the cited references. Applicants further submit that the rejections of the original claims 3 and 4 under 35 U.S.C. 103(a) were based on impermissible hindsight gleaned from the present application, and that the Office Action fails to demonstrate any motivation to combine the cryptic teachings of the cited references.

Claims 5-11, 12-19, 20-24, 25-29, 30-35, and 36-43

Claim 5 requires “partitioning said frame of data into a plurality of portions of data symbols,” and “assigning a plurality of channel elements to demodulate data symbols of said plurality of portions of data symbols, respectively.”

Claim 12 requires “partitioning each of said plurality of frames of data into a plurality of portions of data symbols,” and “assigning a plurality of channel elements to each of said plurality of frames of data to demodulate data symbols of said plurality of portions of data symbols of each of said plurality of frames of data, respectively.”

Claim 20 requires “a finger resource for partitioning said frame of data into a plurality of portions of data symbols,” and “a plurality of channel elements for demodulating data symbols of said plurality of portions of data symbols, respectively.”

Claim 25 requires “a finger resource for partitioning each of said plurality of frames of data into a plurality of portions of data symbols,” and “a plurality of channel elements assigned to each of said plurality of frames of data to demodulate data symbols of said plurality of portions of data symbols of each of said plurality of frames of data, respectively.”

Claim 30 requires “means for partitioning said frame of data into a plurality of portions of data symbols,” and “means for assigning a plurality of channel elements to demodulate data symbols of said plurality of portions of data symbols, respectively.”

Claim 36 requires “means for partitioning each of said plurality of frames of data into a plurality of portions of data symbols,” and “means for assigning a plurality of channel elements to each of said plurality of frames of data to demodulate data symbols of said plurality of portions of data symbols of each of said plurality of frames of data, respectively.”

Applicants submit that the cited references fail to teach or suggest the above limitations of claims 5, 12, 20, 25, 30 and 36 for at least similar reasons to the reasons discussed above with respect to claim 1, and thus submit that claims 5, 12, 20, 25, 30 and 36 are patentable over the cited references.

Applicants further submit that dependent claims 6-11, 13-19, 21-24, 26-29, 31-35 and 37-43 are also patentable at least by virtue of their dependency from claims 5, 12, 20, 25, 30 and 36, respectively, and also because claims 6-11, 13-19, 21-24, 26-29, 31-35 and 37-43 include features that are neither taught nor suggested by the cited references.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicants submit that all pending claims in the application are patentable and in condition for allowance. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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